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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/977,726	10/15/2001	James W. Landes	01-521	3323

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PATENT DEPT.  
PEORIA, IL 616296490

EXAMINER

SWENSON, BRIAN L

ART UNIT	PAPER NUMBER
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3618

DATE MAILED: 04/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/977,726

Applicant(s)

LANDES ET AL.

Examiner

Brian Swenson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 March 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Arguments***

1. Acknowledgment is made of the amendment filed on 20 March 2003 and placed in the file as paper number 4 where:

- a. Paragraph 16 has been replaced;
- b. claims 1, 2, 7, 8, and 11-16 have been amended; and
- c. claims 1-16 pending.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-8, 11-13 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,076,622 issued to Chakraborty et al.

Chakraborty et al. teach in Figures 1-10 and respective portions of the specification of a system and method for intelligent cruise control of a semi-trailer. Chakraborty et al. disclose an electric engine controller (40; Col. 6, lines 56-57), the electronic controller produces fuel delivery commands to control power output of the engine, included within the electronic controller is a cruise control module (70; Col. 8, lines 15-17). The cruise control module functions as either an advanced (intelligent) cruise controller that maintains a constant following distance from a preceding vehicle and the cruise control module can function also as a traditional cruise controller (Col. 8,

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lines 15-17). The cruise controller can be engaged/disengaged via a set button located within the dash console (30; Col. 10, lines 64+, Col. 11, lines 1-8). The electronic controller receives communicates signals from a plurality of sensors including: an acceleration pedal sensor (50), brake pedal sensor (52) and an inter-vehicle distance sensor (58) to operate the cruise controller (Cols. 6-7). The communication interface between the electronic controller and distance sensor is a controller area network (CAN) or other acceptable communication link (Col. 7, lines 50+). The control logic sequence for the cruise control system is shown in Figure 3 and Cols. 9+. Chakraborty et al. teach of determining the status of the vehicle distance sensor via the CAN communication link. Chakraborty et al. teach that a forward vehicle may not be detected by a non-valid communication signal caused by electromagnetic interference or unanticipated scattering of the transmitted radar beam (Col. 110, lines 30-33). If a no-forward vehicle signal is sensed than a zero order hold is placed on the system variable for a first time period, causing the cruise control to be disengaged for brief interruptions in the signal. The signal is examined over a period of time, preferably of two seconds. If it is determined after the elapsed two seconds if there is a malfunction in the sensor than the intelligent cruise controller is disabled (Col. 10, lines 5-56).

Chakraborty et al. teach that the intelligent cruise control system is for vehicles used over a broad range of vehicle weight classes, including heavy-duty vehicles (Col. 4, lines 1-5), but does not specifically state that the engine is a compression ignition engine. It is well known in the vehicle art that heavy-duty vehicles are typically diesel

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compression ignition engines (Col. 2, lines 19-20). It is obvious to one having ordinary skill in the vehicle art that the engine is a compression ignition engine.

In regards, to claims 3-6 Chakraborty et al. disclose the claimed invention with a first time period that is dependent on the rate at which the control logic shown in Figure 3 is cycled and Chakraborty et al. disclose a second time period that is, preferably about 2000 milliseconds. It would have been obvious to one having ordinary skill in the art at the time the invention was made to that the two time periods could be chosen to be about 500 and 3500 ms, respectfully since it has been held that discovering an optimum value optimum value of a result effective variable involves only routine skill in the art.

In regards to claim 15 Chakraborty et al. does not specifically state that the dashboard console (30) contains a resume switch. It would have been obvious to one having ordinary skill in the art at the time the invention was made to include a cruise control resume switch in the dashboard console. One would be motivated to include a resume switch to allow the vehicle to resume a set speed after passing a slower vehicle.

3. Claims 9-10 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chakraborty et al. in view of U.S. Patent No. 4,120,373 issued to Fleischer.

Chakraborty et al. does not teach of turning the engine of the vehicle off to re-enable the cruise control.

Fleischer teaches, in Figures 1 and 2 and respective portions of the specification of a vehicle speed control system with a dual interrupt safety circuit for a fuel control element in a vehicle. The vehicle's speed control system disengages the coupling (41) to the fuel supply element based on a disabled signal detected that is generated by the

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operator or by mechanical, electrical or circuit failure which will disable the vehicle speed control system based on a time constant of approximately 200 ms for circuit (60). If the coupling (41) used to disengage the speed control system is defective then there is a secondary means for disabling the vehicle speed control system. Timing circuit (84,85) has a time constant that is long with respect to circuit (60) and uses logic to determine whether there is a defect in the coupling based on how long it takes for the throttle to return to engine idle position. If the coupling is found to be defective a malfunction signal is stored in memory (90) and the throttle is returned to an engine idle opening position in approximately 2 seconds, depending on the previous position of the throttle. The malfunction signal is stored in memory (90) disabling control of the speed control system. The malfunction signal can only be cleared by opening the ignition switch or restarting the engine (Col. 6, lines 67-68 and Col. 7, lines 1-5). It would have been obvious to one having ordinary skill in the art at the time the invention was made to allow the cruise controller taught by Chakraborty et al. to be re-enabled by restarting the engine, as taught by Fleischer. The cruise controller taught by Chakraborty et al. becomes disengaged if the distance sensor has malfunctioned. Including the control method taught by Fleischer of disabling a fuel controller, in response to a defect or malfunction detection into the electronic controller taught by Chakraborty et al. would increase the safety of the vehicle by not allowing a damaged or defective cruise control to resume operation until the vehicle can be stopped and safety check performed.

***Response to Arguments***

4. Applicant's arguments with respect to claim 1-16 have been considered but are moot in view of the new ground(s) of rejection.
5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Swenson whose telephone number is (703) 305-8163. The examiner can normally be reached on M-F 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Johnson can be reached on (703) 308-0885. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7687 for regular communications and (703) 305-7687 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

Brian Swenson  
Examiner  
Art Unit 3618



bls

April 22, 2003



BRIAN L. JOHNSON 4/23  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600